RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.

Application Serial Number: _10/645,659A_

Source: _1 FWO_

Date Processed by STIC: _3/15/05_

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IFWO

RAW SEQUENCE LISTING   DATE: 03/15/2005
PATENT APPLICATION: US/10/645,659A   TIME: 14:50:50

Input Set : A:\PTO.FG.txt
Output Set: N:\CRF4\03152005\J645659A.raw

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 5 <110> APPLICANT: Yacoby-Zeevi, Oron
 6         Peretz, Tuvia
 7         Miron, Daphna
 8         Shlomi, Yinon
 9         Pecker, Iris
10         Ayal-Hershkovitz, Maty
11         Feinstein, Elena
12         Van Gelder, Joel M.
13         Vlodavsky, Israel
14         Friedmann, Yael
17 <120> TITLE OF INVENTION: HEPARANASE ACTIVITY NEUTRALIZING ANTI- HEPARANASE MONOCLONAL
18        ANTIBODY AND OTHER ANTI-HEPARANASE ANTIBODIES
20 <130> FILE REFERENCE: 26128
22 <140> CURRENT APPLICATION NUMBER: US/10/645,659A         C-->
22 <141> CURRENT FILING DATE: 2003-08-22                    C-->
22 <160> NUMBER OF SEQ ID NOS: 16
24 <170> SOFTWARE: PatentIn version 3.3
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 386
28 <212> TYPE: PRT
29 <213> ORGANISM: Homo sapiens
32 <220> FEATURE:
33 <221> NAME/KEY: misc_feature
34 <223> OTHER INFORMATION: 45 kDa subunit of mature processed heparanase dimer
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43              20                  25                  30
46 Ala Leu Leu Arg Thr Ala Asp Leu Gln Trp Asn Ser Ser Asn Ala Gln
47          35                  40                  45
50 Leu Leu Leu Asp Tyr Cys Ser Ser Lys Gly Tyr Asn Ile Ser Trp Glu
51      50                  55                  60
54 Leu Gly Asn Glu Pro Asn Ser Phe Leu Lys Lys Ala Asp Ile Phe Ile
55 65                  70                  75                  80
58 Asn Gly Ser Gln Leu Gly Glu Asp Phe Ile Gln Leu His Lys Leu Leu
59              85                  90                  95
62 Arg Lys Ser Thr Phe Lys Asn Ala Lys Leu Tyr Gly Pro Asp Val Gly
63              100                 105                 110
66 Gln Pro Arg Arg Lys Thr Ala Lys Met Leu Lys Ser Phe Leu Lys Ala
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70 Gly Gly Glu Val Ile Asp Ser Val Thr Trp His His Tyr Tyr Leu Asn
71      130                 135                 140
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 74 Gly Arg Thr Ala Thr Arg Glu Asp Phe Leu Asn Pro Asp Val Leu Asp
 75 145                 150                 155                 160
 78 Ile Phe Ile Ser Ser Val Gln Lys Val Phe Gln Val Val Glu Ser Thr
 79                 165                 170                 175
 82 Arg Pro Gly Lys Lys Val Trp Leu Gly Glu Thr Ser Ser Ala Tyr Gly
 83                 180                 185                 190
 86 Gly Gly Ala Pro Leu Leu Ser Asp Thr Phe Ala Ala Gly Phe Met Trp
 87                 195                 200                 205
 90 Leu Asp Lys Leu Gly Leu Ser Ala Arg Met Gly Ile Glu Val Val Met
 91         210                 215                 220
 94 Arg Gln Val Phe Phe Gly Ala Gly Asn Tyr His Leu Val Asp Glu Asn
 95 225                 230                 235                 240
 98 Phe Asp Pro Leu Pro Asp Tyr Trp Leu Ser Leu Leu Phe Lys Lys Leu
 99                 245                 250                 255
102 Val Gly Thr Lys Val Leu Met Ala Ser Val Gln Gly Ser Lys Arg Arg
103                 260                 265                 270
106 Lys Leu Arg Val Tyr Leu His Cys Thr Asn Thr Asp Asn Pro Arg Tyr
107             275                 280                 285
110 Lys Glu Gly Asp Leu Thr Leu Tyr Ala Ile Asn Leu His Asn Val Thr
111         290                 295                 300
114 Lys Tyr Leu Arg Leu Pro Tyr Pro Phe Ser Asn Lys Gln Val Asp Lys
115 305                 310                 315                 320
118 Tyr Leu Leu Arg Pro Leu Gly Pro His Gly Leu Leu Ser Lys Ser Val
119                 325                 330                 335
122 Gln Leu Asn Gly Leu Thr Leu Lys Met Val Asp Asp Gln Thr Leu Pro
123                 340                 345                 350
126 Pro Leu Met Glu Lys Pro Leu Arg Pro Gly Ser Ser Leu Gly Leu Pro
127             355                 360                 365
130 Ala Phe Ser Tyr Ser Phe Phe Val Ile Arg Asn Ala Lys Val Ala Ala
131         370                 375                 380
134 Cys Ile
135 385
138 <210> SEQ ID NO: 2
139 <211> LENGTH: 535
140 <212> TYPE: PRT
141 <213> ORGANISM: Mus musculus
143 <400> SEQUENCE: 2
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149 Ala Gln Gly Ala Pro Ala Gly Thr Ala Pro Thr Asp Asp Val Val Asp
150             20                  25                  30
153 Leu Glu Phe Tyr Thr Lys Arg Pro Leu Arg Ser Val Ser Pro Ser Phe
154         35                  40                  45
157 Leu Ser Ile Thr Ile Asp Ala Ser Leu Ala Thr Asp Pro Arg Phe Leu
158     50                  55                  60
161 Thr Phe Leu Gly Ser Pro Arg Leu Arg Ala Leu Ala Arg Gly Leu Ser
162 65                  70                  75                  80
165 Pro Ala Tyr Leu Arg Phe Gly Gly Thr Lys Thr Asp Phe Leu Ile Phe
166             85                  90                  95
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RAW SEQUENCE LISTING   DATE: 03/15/2005
PATENT APPLICATION: US/10/645,659A   TIME: 14:50:50

Input Set : A:\PTO.FG.txt
Output Set: N:\CRF4\03152005\J645659A.raw

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170         100                 105             110
173 Gln Val Asn His Asp Ile Cys Arg Ser Glu Pro Val Ser Ala Ala Val
174     115                 120             125
177 Leu Arg Lys Leu Gln Val Glu Trp Pro Phe Gln Glu Leu Leu Leu Leu
178     130             135             140
181 Arg Glu Gln Tyr Gln Lys Glu Phe Lys Asn Ser Thr Tyr Ser Arg Ser
182 145             150             155             160
185 Ser Val Asp Met Leu Tyr Ser Phe Ala Lys Cys Ser Gly Leu Asp Leu
186             165             170             175
189 Ile Phe Gly Leu Asn Ala Leu Leu Arg Thr Pro Asp Leu Arg Trp Asn
190             180             185             190
193 Ser Ser Asn Ala Gln Leu Leu Leu Asp Tyr Cys Ser Ser Lys Gly Tyr
194         195             200             205
197 Asn Ile Ser Trp Glu Leu Gly Asn Glu Pro Asn Ser Phe Trp Lys Lys
198     210             215             220
201 Ala His Ile Leu Ile Asp Gly Leu Gln Leu Gly Glu Asp Phe Val Glu
202 225             230             235             240
205 Leu His Lys Leu Leu Gln Arg Ser Ala Phe Gln Asn Ala Lys Leu Tyr
206             245             250             255
209 Gly Pro Asp Ile Gly Gln Pro Arg Gly Lys Thr Val Lys Leu Leu Arg
210             260             265             270
213 Ser Phe Leu Lys Ala Gly Gly Glu Val Ile Asp Ser Leu Thr Trp His
214         275             280             285
217 His Tyr Tyr Leu Asn Gly Arg Ile Ala Thr Lys Glu Asp Phe Leu Ser
218     290             295             300
221 Ser Asp Ala Leu Asp Thr Phe Ile Leu Ser Val Gln Lys Ile Leu Lys
222 305         .     310             315             320
225 Val Thr Lys Glu Ile Thr Pro Gly Lys Lys Val Trp Leu Gly Glu Thr
,226             325             330             335
229 Ser Ser Ala Tyr Gly Gly Gly Ala Pro Leu Leu Ser Asn Thr Phe Ala
230             340             345             350
233 Ala Gly Phe Met Trp Leu Asp Lys Leu Gly Leu Ser Ala Gln Met Gly
234         355             360             365
237 Ile Glu Val Val Met Arg Gln Val Phe Phe Gly Ala Gly Asn Tyr His
238     370             375             380
241 Leu Val Asp Glu Asn Phe Glu Pro Leu Pro Asp Tyr Trp Leu Ser Leu
242 385             390             395             400
245 Leu Phe Lys Lys Leu Val Gly Pro Arg Val Leu Leu Ser Arg Val Lys
246             405             410             415
249 Gly Pro Asp Arg Ser Lys Leu Arg Val Tyr Leu His Cys Thr Asn Val
250             420             425             430
253 Tyr His Pro Arg Tyr Gln Glu Gly Asp Leu Thr Leu Tyr Val Leu Asn
254         435             440             445
257 Leu His Asn Val Thr Lys His Leu Lys Val Pro Pro Pro Leu Phe Arg
258     450             455             460
261 Lys Pro Val Asp Thr Tyr Leu Leu Lys Pro Ser Gly Pro Asp Gly Leu
262 465             470             475             480
265 Leu Ser Lys Ser Val Gln Leu Asn Gly Gln Ile Leu Lys Met Val Asp
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RAW SEQUENCE LISTING   DATE: 03/15/2005
PATENT APPLICATION: US/10/645,659A   TIME: 14:50:50

Input Set : A:\PTO.FG.txt
Output Set: N:\CRF4\03152005\J645659A.raw

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266                     485                     490                     495
269 Glu Gln Thr Leu Pro Ala Leu Thr Glu Lys Pro Leu Pro Ala Gly Ser
270             500                     505                     510
273 Ala Leu Ser Leu Pro Ala Phe Ser Tyr Gly Phe Phe Val Ile Arg Asn
274         515                     520                     525
277 Ala Lys Ile Ala Ala Cys Ile
278     530                     535
281 <210> SEQ ID NO: 3
282 <211> LENGTH: 536
283 <212> TYPE: PRT
284 <213> ORGANISM: Rattus norvegicus
286 <400> SEQUENCE: 3
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289 1                   5                   10                  15
292 Leu Thr Gln Gly Thr Pro Ala Gly Thr Ala Pro Thr Lys Asp Val Val
293             20                      25                      30
296 Asp Leu Glu Phe Tyr Thr Lys Arg Leu Phe Gln Ser Val Ser Pro Ser
297         35                      40                      45
300 Phe Leu Ser Ile Thr Ile Asp Ala Ser Leu Ala Thr Asp Pro Arg Phe
301     50                      55                      60
304 Leu Thr Phe Leu Gly Ser Pro Arg Leu Arg Ala Leu Ala Arg Gly Leu
305 65                      70                      75                      80
308 Ser Pro Ala Tyr Leu Arg Phe Gly Gly Thr Lys Thr Asp Phe Leu Ile
309             85                      90                      95
312 Phe Asp Pro Asn Lys Glu Pro Thr Ser Glu Glu Arg Ser Tyr Trp Gln
313             100                     105                     110
316 Ser Gln Asp Asn Asn Asp Ile Cys Gly Ser Glu Arg Val Ser Ala Asp
317         115                     120                     125
320 Val Leu Arg Lys Leu Gln Met Glu Trp Pro Phe Gln Glu Leu Leu Leu
321     130                     135                     140
324 Leu Arg Glu Gln Tyr Gln Arg Glu Phe Lys Asn Ser Thr Tyr Ser Arg
325 145                     150                     155                     160
328 Ser Ser Val Asp Met Leu Tyr Ser Phe Ala Lys Cys Ser Arg Leu Asp
329             165                     170                     175
332 Leu Ile Phe Gly Leu Asn Ala Leu Leu Arg Thr Pro Asp Leu Arg Trp
333             180                     185                     190
336 Asn Ser Ser Asn Ala Gln Leu Leu Leu Asn Tyr Cys Ser Ser Lys Gly
337         195                     200                     205
340 Tyr Asn Ile Ser Trp Glu Leu Gly Asn Glu Pro Asn Ser Phe Trp Lys
341     210                     215                     220
344 Lys Ala Gln Ile Ser Ile Asp Gly Leu Gln Leu Gly Glu Asp Phe Val
345 225                     230                     235                     240
348 Glu Leu His Lys Leu Leu Gln Lys Ser Ala Phe Gln Asn Ala Lys Leu
349             245                     250                     255
352 Tyr Gly Pro Asp Ile Gly Gln Pro Arg Gly Lys Thr Val Lys Leu Leu
353             260                     265                     270
356 Arg Ser Phe Leu Lys Ala Gly Gly Glu Val Ile Asp Ser Leu Thr Trp
357         275                     280                     285
360 His His Tyr Tyr Leu Asn Gly Arg Val Ala Thr Lys Glu Asp Phe Leu
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RAW SEQUENCE LISTING   DATE: 03/15/2005
PATENT APPLICATION: US/10/645,659A   TIME: 14:50:50

Input Set : A:\PTO.FG.txt
Output Set: N:\CRF4\03152005\J645659A.raw

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361      290                   295                  300
364 Ser Ser Asp Val Leu Asp Thr Phe Ile Leu Ser Val Gln Lys Ile Leu
365 305                   310                  315                  320
368 Lys Val Thr Lys Glu Met Thr Pro Gly Lys Lys Val Trp Leu Gly Glu
369                   325                  330                  335
372 Thr Ser Ser Ala Tyr Gly Gly Gly Ala Pro Leu Leu Ser Asn Thr Phe
373                   340                  345                  350
376 Ala Ala Gly Phe.Met Trp Leu Asp Lys Leu Gly Leu Ser Ala Gln Leu
377             355                   360                  365
380 Gly Ile Glu Val Val Met Arg Gln Val Phe Phe Gly Ala Gly Asn Tyr
381       370                   375                  380
384 His Leu Val Asp Glu Asn Phe Glu Pro Leu Pro Asp Tyr Trp Leu Ser
385 385                   390                  395                  400
388 Leu Leu Phe Lys Lys Leu Val Gly Pro Lys Val Leu Met Ser Arg Val
389                   405                  410                  415
392 Lys Gly Pro Asp Arg Ser Lys Leu Arg Val Tyr Leu His Cys Thr Asn
393             420                   425                  430
396 Val Tyr His Pro Arg Tyr Arg Glu Gly Asp Leu Thr Leu Tyr Val Leu
397       435                   440                  445
400 Asn Leu His Asn Val Thr Lys His Leu Lys Leu Pro Pro Pro Met Phe
401       450                   455                  460
404 Ser Arg Pro Val Asp Lys Tyr Leu Leu Lys Pro Phe Gly Ser Asp Gly
405 465                   470                  475                  480
408 Leu Leu Ser Lys Ser Val Gln Leu Asn Gly Gln Thr Leu Lys Met Val
409             485                   490        .         495
412 Asp Glu Gln Thr Leu Pro Ala Leu Thr Glu Lys Pro Leu Pro Ala Gly
413             500                   505                  510
416 Ser Ser Leu Ser Val Pro Ala Phe Ser Tyr Gly Phe Phe Val Ile Arg
417             515                   520                  525
420 Asn Ala Lys Ile Ala Ala Cys Ile
421       530                   535
424 <210> SEQ ID NO: 4
425 <211> LENGTH: 543
426 <212> TYPE: PRT
427 <213> ORGANISM: Homo sapiens
429 <400> SEQUENCE: 4
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432 1             5                   10                  15
435 Leu Leu Gly Pro Leu Gly Pro Leu Ser Pro Gly Ala Leu Pro Arg Pro
436             20                   25                  30
439 Ala Gln Ala Gln Asp Val Val Asp Leu Asp Phe Phe Thr Gln Glu Pro
440             35                   40                  45
443 Leu His Leu Val Ser Pro Ser Phe Leu Ser Val Thr Ile Asp Ala Asn
444       50                   55                  60
447 Leu Ala Thr Asp Pro Arg Phe Leu Ile Leu Leu Gly Ser Pro Lys Leu
448 65                   70                  75                  80
451 Arg Thr Leu Ala Arg Gly Leu Ser Pro Ala Tyr Leu Arg Phe Gly Gly
452             85    .              90                  95
455 Thr Lys Thr Asp Phe Leu Ile Phe Asp Pro Lys Lys Glu Ser Thr Phe
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 03/15/2005
PATENT APPLICATION: US/10/645,659A   TIME: 14:50:51

Input Set : A:\PTO.FG.txt
Output Set: N:\CRF4\03152005\J645659A.raw

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:12; Xaa Pos. 1,2,3,4,5,6,7,8
Seq#:13; Xaa Pos. 1,2,3,4,5,6

VERIFICATION SUMMARY   DATE: 03/15/2005
PATENT APPLICATION: US/10/645,659A   TIME: 14:50:51

Input Set : A:\PTO.FG.txt
Output Set: N:\CRF4\03152005\J645659A.raw

L:22 M:270 C: Current Application Number differs, Replaced Current Application No
L:22 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:847 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
L:887 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0